

POHATCONG VALLEY GROUND WATER CONTAMINATION WARREN COUNTY, NJ

Cleanup Activities

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Background

The Pohatcong Valley Groundwater Contamination Superfund Site (Site) is located in parts of Washington Borough, Washington Township, Franklin Township and Greenwich Township in Warren County, New Jersey. The Site involves primarily trichloroethylene (TCE) and perchloroethylene (PCE) contamination of the Kittatinny Limestone Aquifer underlying the Pohatcong Valley. The aquifer serves as the sole source of drinking water for public water systems and private parties in the area. The Site is approximately 10 miles long and approximately 1.5 miles wide and is defined by the extent of two plumes of groundwater contamination, one that is contaminated primarily with TCE ("TCE plume") and another that is contaminated primarily with PCE ("PCE plume"). EPA separated the Site into three operable units ("OUs"). OU1 addresses contaminated groundwater within Washington Borough and parts of Washington and Franklin Townships; OU2 addresses groundwater contamination downgradient of OU1 within portions of Franklin and Greenwich Townships; and OU3 addresses contaminated soil source areas within the OU1 area. After immediate actions to protect human health and the environment, the site's long-term cleanup is ongoing.

What Has Been Done to Clean Up the Site?

Immediate Actions: Warren County supplied bottled water to affected residences in the OU1 Study Area where the drinking water exceeded standards in the mid-1980s. In 1988 and 1989, the NJDEP hooked up most affected businesses and residences to public water supply wells. For the most part, use of contaminated private wells has been discontinued in OU1. Most affected residences in the OU1 TCE area are currently connected to a potable municipal water supply. The

potentially responsible parties (PRPs), under EPA oversight, are continuing to conduct screening level groundwater samples from potable wells in the area, and hookups to public water are being performed on an as needed basis.

EPA and/or the PRPs have been sampling the private potable well water in residences within the OU2 T&I Area to ensure protectiveness of residences on private wells in the interim of the OU2 remedy implementation. The most recent sampling events were conducted in 2011, 2013 and 2015. Any samples exceeding the drinking water standards for TCE are referred to NJDEP for follow-up actions, which may include the installation of Point of Entry Treatment Systems (POETs) on private potable wells. To date, as a result of various sampling activities, NJDEP has installed POETs at about 80 residences. POETs are small treatment systems connected to a residential water supply line to remove volatile organic compounds (VOCs) from groundwater using activated carbon. The carbon has to be periodically sampled and replaced to remain protective. Presently, NJDEP services POETs and collects confirmation samples to make sure the systems are operating properly.

As part of its vapor intrusion investigation during 2007, EPA installed vapor intrusion remedial systems in one public school and one residence along the Site's OU-1/OU-2 boundary. In early 2010, EPA installed vapor intrusion remedial systems in one apartment building in Washington Borough. In 2013, buildings throughout the OU3 Study Area were screened for potential vapor intrusion during the OU3 remedial investigation. The only building determined to have the potential for vapor intrusion was the former ANC building. Upon analysis of the vapor data, during the summer of 2013, soil vapor extraction (SVE) and sub-slab depressurization (SSD) systems to mitigate exposure to TCE inside the building were installed by a potentially responsible party under EPA oversight. The systems treat the vapors associated with soils to a depth of approximately 5 feet below the building slab. EPA continues to periodically sample for vapor intrusion throughout the Site.

Long-term Cleanup: OU1-TCE and OU1-PCE includes a large area of groundwater contamination in portions of Washington Borough and Franklin Township. Most of the residents of this area receive drinking water from a public water supply that meets drinking water standards. EPA selected a remedy (ROD) in 2006 to address this groundwater contamination, which includes the extraction and treatment of contaminated groundwater. Engineering designs to implement this remedy has been completed. The OU1-TCE groundwater extraction, treatment and reinjection system (GWTP) was constructed in 2016 and has been operating since March 25, 2016. The OU1-PCE GWTP was also constructed in 2016 and has been operating since June 2, 2016. The OU1-TCE system is designed to extract approximately 500 gallons per minute (gpm) of contaminated groundwater for treatment and reinjection of the treated effluent back into the aquifer. The OU1-PCE system is designed to extract approximately 50 gpm of contaminated groundwater for treatment and reinjection of the treated effluent back into the aquifer.

What Is the Current Site Status?

Due to its size and complexity, EPA divided the Site into three operable units, referred to as OU1, OU2 and OU3. OU1 includes parts of Washington Borough, Washington Township and Franklin Township up to the village of Broadway, at about Asbury Broadway Road. It encompasses about 5,600 acres. The OU2 Study Area is immediately downgradient of OU1 and encompasses about 4,200 acres. It includes parts of Franklin and Greenwich Townships. The OU3 Study Area covers the former American National Can (ANC) facility, now owned by Albea Americas, Inc., and adjacent areas in Washington Borough. It includes the identified source areas of contamination for the Site's TCE-contaminated groundwater.

OU1 is further subdivided into the OU1-TCE Plume (groundwater primarily contaminated with TCE that emanated from the former ANC facility, and the OU1-PCE plume (groundwater primarily contaminated with PCE from the former Tung-Sol Tubing facility). The entire OU1 area covers Washington Borough, Washington Township, and the northern portion of Franklin Township. The OU1 PCE area is significantly smaller, encompassed solely within Washington Borough. The OU1 TCE area covers from the former ANC facility southward to about Asbury-Broadway Road. EPA selected a Record of Decision (ROD) remedy for both OU1 contaminated groundwater plumes in 2006, that includes the construction of a groundwater extraction and treatment plant to address the most highly contaminated portions of the separate OU1-TCE and OU1-PCE plumes. Thus, there were two separate designs for each of the treatment plants in the OU1-TCE and OU1-PCE areas. Both designs are completed and both groundwater extraction, treatment, and recharge systems have been constructed and have been operational since 2016.

Cleanup of OU2 relates to TCE-contaminated groundwater resulting from the OU1-TCE Plume and is located downgradient of the OU1 area in portions of Franklin and Greenwich Townships. There is no public water supply currently available in the delineated OU2 Threatened and Impacted Area (T&I Area), with the exception of a few homes in Franklin and Greenwich Township. In the interim of remedy implementation, EPA has been conducting periodic sampling of residential and commercial private potable wells in the T&I Area and potable wells affected by Site contamination have received individual treatment units from NJDEP. EPA selected a remedy for OU2 in 2010 that includes the construction of water lines and service connections throughout the T&I Area to provide potable water. The design for the remedy was completed in June 2017. Construction of the water lines is anticipated to begin in Spring of 2018.

OU3 includes the soils source areas for the groundwater contamination, the former ANC facility in Washington Township and three adjacent properties. EPA issued a ROD for OU3 in September 2016. The OU3 ROD includes the implementation of deep soil vapor extraction (SVE) and/or thermal treatment to address deep soil contamination underlying the former ANC building; long-term operation and maintenance of the existing shallow SVE system and sub-slab depressurization (SSD) systems within the former ANC building; long-term groundwater and indoor air monitoring in the OU3 study area and the implementation of institutional controls.

Activity and Use Limitations

At this site, activity and use limitations that EPA calls institutional controls are in place. Institutional controls play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use. They also guide human behavior. For instance, zoning restrictions prevent land uses – such as residential uses – that are not consistent with the level of cleanup.

For more background, see [Institutional Controls](#).

A site-wide Classification Exemption Area (CEA) has been implemented to restrict the use of groundwater in the OU1 and OU2 contaminated area.

Enforcement Information

In March 2015, the U.S. Department of Justice and EPA reached a settlement with several companies to address the Site. Companies included Pechiney Plastic Packaging, Inc. (Pechiney), Albea Americas, Inc., Bristol Meyers Squibb Company, Citigroup Inc., and Rexam Beverage Can Company. The Settlement resulted in funds recovered for EPA past costs as well as funding to complete implementation of the OU1 TCE and OU2 remedial actions. In addition, under the terms of the settlement, a group of PRPs will implement the remedies for OU1 TCE, OU2 and OU3, with EPA oversight.

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